

SN 10/613,345 - Remarks - Response under 37 C.F.R. §1.116
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Remarks

This amendment is responsive to the official action mailed July 12, 2005, and is accompanied by a one month extension under 37 C.F.R. §1.136(a) and a charge authorization for the required fee.

Pending claims 1, 2 and 6-9 are alternatively rejected as obvious over proposed combinations of Oberdörfer (Pat. 5009247) and Mericle (4214586); or Oberdörfer and Frey (4067534), under 35 U.S.C. §103. In the official action, it is noted that the primary reference Oberdörfer differs from the claimed invention. The Mericle or Frey references are considered to supply the teachings missing from Oberdörfer that would lead the person of ordinary skill to the invention claimed. Reconsideration is requested. There is no basis, proceeding prospectively from the prior art as required, to conclude that a person of ordinary skill who was confronted with the problems addressed by applicant would find it routine or possible to select and apply the precise aspects of the prior art references that might lead toward the invention. Even assuming that the person of ordinary skill sought to use the cited references to attack the same problems, there is no reason to believe that the result would be applicant's invention claimed as a whole.

As described in the specification and as defined in claim 1, a plumbing fixture can have a housing mounted at an installation opening, such as an opening in a counter top, next to a sink. The housing typically controls water flow and water temperature, and provides a mixed water outlet. According to the claims, a first line exits from the housing through the installation opening and a further line is routed back through the installation opening. An inventive aspect is the structure of this flow line that loops down from the housing and back up again into the housing. Its connections are made to include the first line exiting and the further line returning to the housing, and these two lines are coupled via a quick-connect connector that connects together ends of the two lines, outside the housing of the plumbing fixture.

The conventional technique for providing a pull-out spray device is to provide a line that extends from the housing to the spray device, looping under the counter without a junction other than the end junctions at the housing connection and at the

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sprayer, respectively. Applicant has provided a different arrangement wherein the two lines are coupled along the route, and wherein the coupling is in particular operable by manipulating detent and latch elements that are accessible and manually operable at the junction of the lines (i.e., away from the housing along the route of the line to the spray device) without the need for tools.

Oberdörfer is a good example of the conventional structure. Referring to Fig. 1, a flexible line 4 provides a loop depending under housing 1, to be mounted in a counter top (not shown). There is no intermediate connection along line 4. Instead, connections are made at opposite ends of line 4, one connection to the end of a rigidly fixed outlet pipe 5 from housing 1, and the other connection to the removable sprayer 3. There is no intermediate connection, let alone a quick connect that is manually operable without tools.

As in applicant's invention, Oberdörfer's sprayer 3 can be pulled out, thereby withdrawing the slack of hose 4. Oberdörfer's hose 4 is generally shown as a dot-dash line, but it should be appreciated that hose 4 obviously has a substantial length as necessary to provide slack. The amount of slack fixes the maximum distance by which sprayer 3 can be pulled out, and thus determines the useful range of sprayer 3.

There is no suggestion in Oberdörfer and no reason of record (apart from applicant's disclosure) to suggest that there would be any advantage to providing a succession of hose lengths between the ends of hose 4. Oberdörfer teaches a continuous hose. Oberdörfer has no teaching or suggestion of such a hose with intermediate connectors.

There is no suggestion in Oberdörfer to suggest that any hose connections should or could be made in any unconventional way. Oberdörfer only specifies the coupling of hose 4 and pipe 5, and expressly states that the coupling of the hose and pipe can be made "in known manner." Thus not only does Oberdörfer fail to teach intermediate couplings, but the only couplings of any kind taught in Oberdörfer are conventional permanent couplings that are torqued tight with tools. Oberdörfer fails to teach or suggest two primary aspects of applicant's invention, namely (1) an

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intermediate coupling in a depending-loop hose and (2) a quick connect coupling that can be attached and detached manually without tools.

According to the official action, Oberdörfer nevertheless renders the invention obvious in combination with hose couplings in Mericle and Frey.

Reconsideration is requested. Mericle and Frey teach generic hose couplers. There is no basis to assert that the mere existence of a hose coupling in the prior art makes it obvious to place hose coupling along a span of hose that has no apparent need or application for a junction. Moreover, neither Mericle nor Frey teaches a hose coupling that would meet applicant's invention claimed as a whole, even if there was some reason to say that such hose coupling should be plugged into Oberdörfer's continuous hose 4. The rejection fails to provide a sufficient incentive for replacing a depending loop hose as in Oberdörfer with plural shorter lengths, and fails to provide couplings that would meet the invention even if one could invent an incentive.

The official action suggests that Mericle is a quick connect fitting with plug-in attributes and that it would be obvious to use Mericle "in order to quickly and conveniently connect the spray head to the mixer of the faucet."

Reconsideration is requested. The combination of Oberdörfer and Mericle must start with one or the other. If one starts with Oberdörfer, there is no convenience incentive to adding an intermediate connection along Oberdörfer's pipe 4 as claimed. It might be possible to replace Oberdörfer's fitting connections at the housing or at the spray head with a Mericle connection, but there is absolutely no incentive for cutting Oberdörfer's hose 4 in two so as to insert a quick connect fitting.

Furthermore, Mericle's fitting is anything but convenient in the context of an under-sink depending loop. Mericle's coupling is an anastomotic coupling device, namely a device for coupling blood vessels or other biological ducts. One cannot routinely expect such teachings to have a place in plumbing connections under sinks.

Even if a person of ordinary skill sought to use Mericle's connection in an under-sink connection, it is impossible to discern how the structure could be used. The

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Mericle blood vessel connector is designed to hold the lumen of the vessel open as well as to connect it to a further length. Thus, as stated at col. 3, lines 29-35, the tubular member (the blood vessel) is "everted" or wrapped back over the end of the adapter, before the connector is assembled. There is no basis for a person of ordinary skill to believe the it would be possible, let alone convenient, to apply such a connector to hose 4 of Oberdörfer, which is a corrugated or armored hose that would plainly not stand to be everted regardless of efforts to add to convenience by including extra fitting connections where none appears to be necessary.

For these reasons, not only is there insufficient incentive to propose a selective combination of the coupling of Mericle with the continuous no-coupling span of Oberdörfer's hose 4, but the coupling of Mericle would just not work in that context. As a result, the rejection under Section 103 lacks the necessary support to provide a prima facie showing of obviousness.

In the latest official action, an alternative rejection is stated as a combination of Oberdörfer and Frey. Reconsideration is requested. Frey, like Mericle, fails to show any incentive whatsoever for breaking Oberdörfer's hose 4 into shorter lengths. Adding apparently superfluous connectors to Oberdörfer's already-connected hose would not be considered necessary and if attempted would not be convenient or quick.

The connector structure of Frey, like that of Mericle, is not suited to a combination with Oberdörfer. Frey teaches a coupling involving rigid PVC tubes, not a coupling at an intermediate point along a flexible hose.

In addition, Frey's connector is not structured to be coupled and decoupled without tools. It is a one-time connection wherein the locking portions need to be permanently attached to the PVC tube ends (see col. 3, lines 43-50, teaching welding). When coupled, the ends of tabs 28 are captured by abutment walls 78 of the recess at a point within the coupler sleeve 60. There is no possible access to release the capture of the abutment walls, once attached as in Fig. 1, except possibly by breaking the coupling or by cutting the coupling away and replacing it with a new one. There is no reason to believe that it would be obvious to apply Frey's PVC pipe joint to Oberdörfer

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and there is no basis to assert that the combination of Frey and Oberdörfer would reach the invention claimed as a whole by applicant even if such a combination was attempted.

The claims as amended particularly and distinctly define the subject matter regarded as the invention. There is no prior art reference of record that meets the invention claimed as a whole. Oberdörfer plainly lacks any disclosure or suggestion of an intermediate connection along the depending loop of hose 4. The references cited in combination with Oberdörfer fail to provide an incentive for placing a junction in such a depending loop. Even if the references that disclose the general idea of pipe connections might be considered, there is no reason to believe that they would be advantageous where they would be needed to meet the invention.

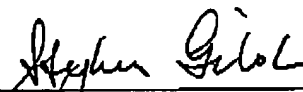
In addition to those points, the claims state that the coupling should be a quick coupling that is manually operated and the references fail to teach such a coupling in any comparable context, instead concerning everted-tube clamping fittings for plug-in connections of biological ducts (Mericle) or permanent plug-in junctions of rigid PVC pipes that cannot be detached without their being destroyed (Frey). There is no incentive for combination and the combination if made would not reach the invention claimed as a whole.

The differences between the invention and the prior art are such that the subject matter claimed, as a whole, is not shown to have been known or obvious. The application is in condition for allowance. Reconsideration and allowance are requested.

Respectfully submitted,

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